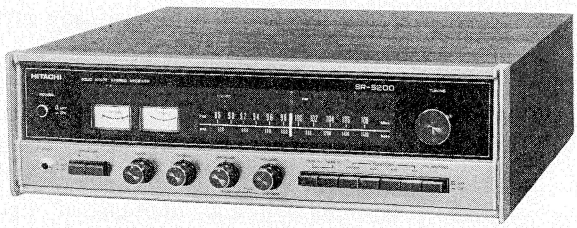
"PROJECT-O"

SR-3200



SR-5200

HITACHI
Hitachi

HITACHI HI-FI COMPONENT
STEREO RECEIVER
MODEL SR-3200
MODEL SR-5200
SERVICE MANUAL

NO.61 1973

1. SPECIFICATIONS

Circuitry ..... FM-AM 2 Band Super-heterodyne
Semi-conductor ..... IC : 3
FET : 1
Transistor : 34
Diode : 21

TUNERS

FM
Frequency range ..... 88 - 108MHz
Sensitivity (IHF) 2.5μV
Image rejection ..... 55dB (at 98MHz)
IF rejection 80dB
Total harmonic distortion ..... Monaural 0.5%
Stereo 0.8%
Signal-to-noise ratio 64dB
Selectivity (IHF) 46dB
Channel separation 36dB
Capture ratio 1.2dB

AM
Frequency range ..... 530 - 1,605kHz
Sensitivity (IHF) 20μV
Image rejection ..... 40dB (at 1,000kHz)
IF rejection ..... 40dB (at 1,000kHz)
Selectivity 30dB

AUDIO-FREQUENCY SECTION

Music power (IHF) SR-3200 ..... 40W
SR-5200 ..... 60W
RMS power SR-3200 ..... 13W/ch(8Ω)
SR-5200 ..... 20W/ch(8Ω)
Total harmonic distortion
SR-3200 ..... 0.1%(at 7W,8Ω)
SR-5200 ..... 0.1%(at 10W,8Ω)
Frequency response ..... 20 - 30,000Hz
Input sensitivity
(at an output 1kHz, 10W:SR-3200)
(at an output 1kHz, 15W:SR-5200)
*The numerals in parentheses show input impedances.
PHONO LOW ..... 2.5mV(60kΩ)
PHONO HIGH ..... 5mV(60kΩ)
AUX ..... 300mV(60kΩ)
TAPE MONITOR 1 (Pin jack) 250mV (50kΩ)
TAPE MONITOR 2 (DIN) 500mV (110kΩ)

Channel separation
PHONO 40dB
AUX 50dB
Hum and noise (IHF)
PHONO LOW 66dB
PHONO HIGH 70dB
AUX 74dB
Load impedance ..... 4 - 16Ω
Damping factor ..... 25(8Ω)
Equalizer characteristic ..... RIAA±2dB
Bass control ..... ±10dB(100Hz)
Treble control ..... ±12dB(10kHz)
Loudness control ..... +9dB(100Hz)
(−30dB volume) ..... +4dB(10kHz)

POWER SUPPLY

Power requirements ..... AC 120V, 60Hz
Power consumption SR-3200 ..... 60W
SR-5200 ..... 74W

DIMENSIONS

17-1/4(W)×5-3/8(H)×15-3/8(D)in.
(438×138×390mm)

WEIGHT

SR-3200 ..... 17.61bs.(8.0kg)
SR-5200 ..... 19.81bs.(9.0kg)

ACCESSORY CIRCUITS

Signal meter, Tuning meter (SR-5200 only), FM stereo indicator, Function indicator, FM muting switch, Loudness switch, Mode switch, Tape monitor switch, Headphone jack, Speaker selector switch, Illuminated dial pointer, Input level switch, Speaker matrix 4 ch switch, AC outlet.

* The above specifications are subject to changes for improvement without notice.

2. FEATURES

1. High performance MOS FET (field effect transistor) is used in the front end of FM tuner section, remarkably reducing noise and interference.
2. The employment of a sharp characteristic mechanical filter and high performance IC in IF amplifier section of FM tuner has further improved the selectivity characteristic, capture ratio and distortion characteristic.
3. The signal meter indicates the correct tuning point during reception of broadcast, while the tuning meter (SR-5200 only) gives you optimum tuning point on the dial for FM reception.
4. The adoption of FM muting circuit eliminates the undesirable noise which occurs between stations while tuning, ensuring comfortable FM reception at all times.
5. The use of complementary ITL· OTL circuit, together with Hitachi's high performance silicon transistors, assures extremely low distortion.
6. The input level switch enables you to adjust the receiver to suit the output of any pick cartridge.
7. Two sets of tape recorders and stereo speaker systems can be connected, permitting change-over from one system to the other. This feature also enables the speaker matrix 4-channel reproduction and dubbing of tape.
8. The one-touch system of speaker terminals assure easy and perfect connection of speakers.

3. DIFFERENCE OF SR-3200 AND SR-5200

3.1 SPECIFICATIONS

	SR-3200	SR-5200
Music power (IHF)	40W	60W
RMS power	13W/ch (8Ω)	20W/ch (8Ω)
Power consumption	60W	74W
Accessory circuits		
Tuning meter	——	O

3.2 CIRCUIT AND REPLACEMENT PARTS

	SR-3200		SR-5200	
SYMBOL NO.	STOCK NO.	DESCRIPTION	STOCK NO.	DESCRIPTION
R711(L,R)	0114171	Carbon film 2.7kΩ ±5% SRD¼P	0114175	Carbon film 3.9kΩ ±5% SRD¼P
R805	0111415	Metal oxide 560Ω ±10% RD2PA	0111417	Metal oxide 820Ω ±10% RD2PA
R808	0134377	Composition 2.2kΩ ±10% RC½GF	0134378	Composition 2.7kΩ ±10% RC½GF
Q701(L,R) Q704(L,R)	2327283	2SA673A (C)	2327387	2SA673AS (C)
Q705(L,R) Q706(L,R)	2327203	2SC1060 (C)	2327053	2SC1030 (C)
VR701(L,R)	0151256 2519321	300Ω - (B) × 2 AUDIO printed wiring board assembly	0151223 2519322	200Ω - (B) × 2 AUDIO printed wiring board assembly
	2217582	Power transformer	2217591	Power transformer
	——	——	2577127	Center meter
	3198641	Dial scale	3198642	Dial scale
	3242271	Escutcheon assembly	3242272	Escutcheon assembly

4. FRONT AND REAR PANEL

SR-3200 FRONT PANEL

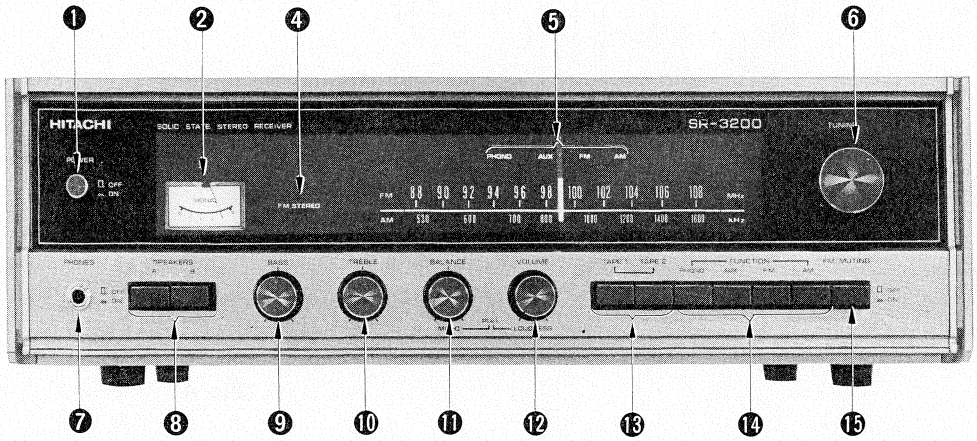


Fig. 1

❶ POWER SWITCH
❷ SIGNAL METER
❸ TUNING METER (SR-5200 only)
❹ STEREO INDICATOR
❺ FUNCTION INDICATOR
❻ TUNING KNOB
❼ HEADPHONE JACK
❽ SPEAKER SELECTOR SWITCH
❾ BASS CONTROL
❿ TREBLE CONTROL
⓫ BALANCE CONTROL AND MODE SWITCH
⓬ VOLUME CONTROL AND LOUDNESS SWITCH
⓭ TAPE MONITOR SWITCH
⓮ FUNCTION SWITCH
⓯ FM MUTING SWITCH

SR-5200 FRONT PANEL

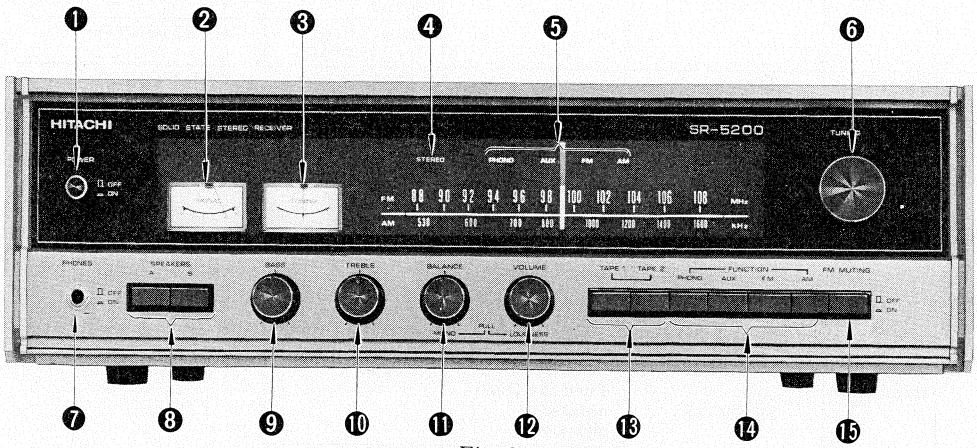


Fig. 2

SR-3200, SR-5200 REAR PANEL

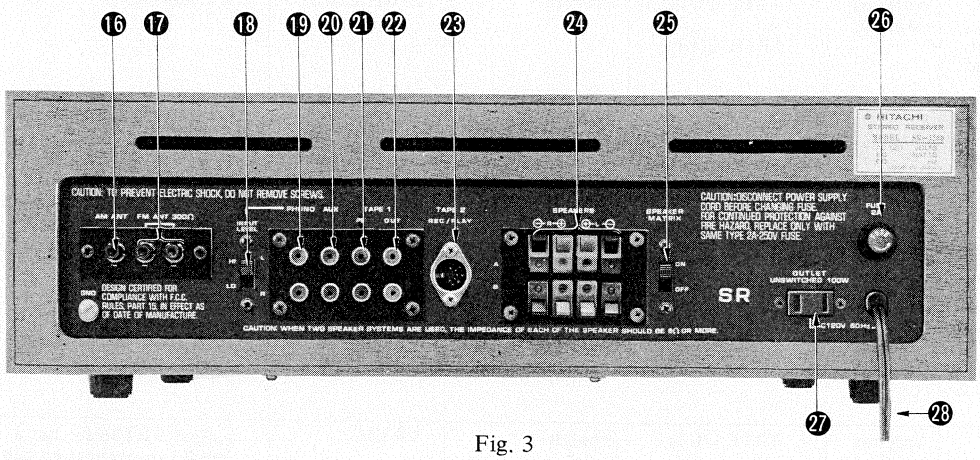

⓰ ⓱ ⓲ ⓳ ⓴ ㉑ ㉒ ㉓ ㉔ ㉕ ㉖ ㉗ ㉘
CAUTION: TO PREVENT ELECTRIC SHOCK DO NOT REMOVE SCREWS.
AM ANT
FM ANT 300Ω
PHONO
AUX
TAPE 1 REC/PLAY
TAPE 2 REC/PLAY
SPEAKERS
SPEAKER MATRIX
DESIGN CERTIFIED FOR COMPLIANCE WITH F.C.C. RULES, PART 15, IN EFFECT AS OF DATE OF MANUFACTURE.
CAUTION: DISCONNECT POWER SUPPLY CORD BEFORE CHANGING FUSE. FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE 3A 250V FUSE.
OUTLET UNSWITCHED 100W
SR
CAUTION: WHEN TWO SPEAKER SYSTEMS ARE USED, THE IMPEDANCE OF EACH OF THE SPEAKER SHOULD BE 8Ω OR MORE.

Fig. 3

⓰ AM ANTENNA TERMINAL
⓱ FM ANTENNA TERMINAL
⓲ INPUT LEVEL SWITCH
⓳ PHONO INPUT TERMINALS
⓴ AUXILIARY INPUT TERMINALS
㉑ TAPE RECORDER INPUT TERMINAL
㉒ TAPE RECORDER OUTPUT TERMINAL
㉓ DIN RECORD/PLAYBACK CONNECTOR
㉔ SPEAKER TERMINALS
㉕ SPEAKER MATRIX SWITCH
㉖ AC POWER FUSE
㉗ AC POWER OUTLET
㉘ POWER CORD

GENERAL ALIGNMENT INSTRUCTION

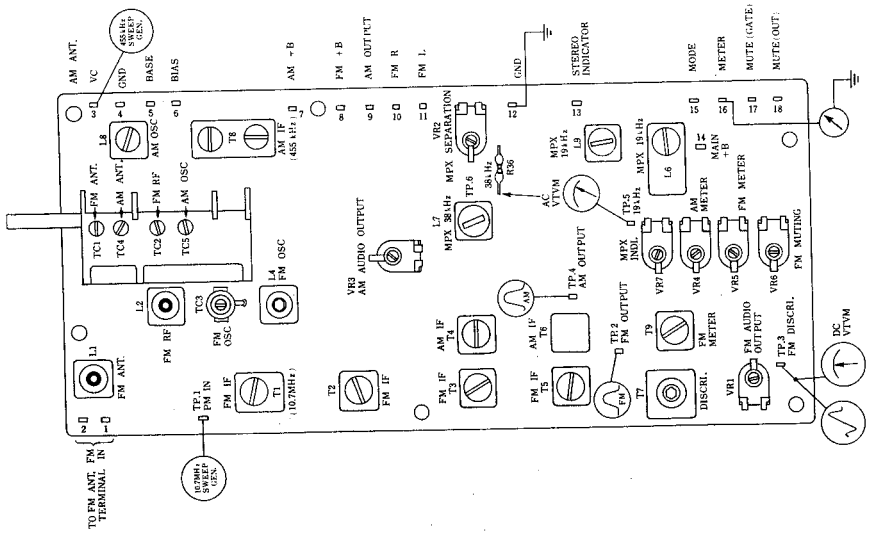


Fig. 4

5.1 FM TUNER ALIGNMENT

Steps		Item	Measuring Instrument	Input Terminal	Output Terminal	Frequency	Adjust	Wave Form
1	(1)	IF Amplifier	10.7MHz±150kHz Sweep Generator	TP 1	TP 2		T107 (upper) T109	Core Max.
	(2)						T101, T102 T103, T105	CAUTION (1)
	(3)	"S" curve		TP 1	TP 3		T107 (lower) T107 (upper)	CAUTION (2)
2		Discriminate	FM signal generator 100MHz 400Hz 100% modulated 60dB at input V.T.V.M.	Antenna terminal	TP 3 (DC balance meter)	100MHz	T107 (upper)	Adjust T107 so that pointer of Balance Meter will become 0V.
3		Distortion	FM signal generator 100MHz 400Hz 100% modulated 60dB at input Distortion meter	Antenna terminal	TAPE OUT(L) or SP OUT(L)	100MHz	T107 (lower)	Adjust T107 so that distortion will become min.
4	(1)	Covering	4.1 FM signal generator 90MHz 400Hz 100% modulated	Antenna terminal	TAPE OUT(L) or SP OUT(L)	90MHz (Turn the Dial pointer at 90MHz)	L104	Output Max.
	(2)		4.2 FM signal generator 106MHz 400Hz 100% modulated			(106MHz Turn the Dial pointer at 106MHz)	TC103	
	(3)							Repeat (1) & (2)
5	(1)	Tracking	5.1 FM signal generator 90MHz 400Hz 100% modulated, 10dB at input V.T.V.M.	Antenna terminal	TAPE OUT(L) or SP OUT(L)	90MHz	L101, L102	Output Max.
	(2)		5.2 FM signal generator 106MHz 400Hz 100% modulated, 10dB at input V.T.V.M.			106MHz	TC101 TC102	
6		Tuning Meter	FM signal generator 98MHz 400Hz 100% modulated, 60dB at input	Antenna terminal	Tuning Meter	98MHz (Set the Tuning meter so that pointer will be max.)	VR105	Adjust VR105 so that pointer of Tuning meter will be 4.
7		Output	FM signal generator 98MHz 400Hz 30% modulated, 60dB at input	Antenna terminal	TAPE OUT	98MHz	VR101	Adjust the output to gain 250mV±2dB.
8		FM Muting	FM signal generator 98MHz 400Hz 100% modulated, 24dB at input	Antenna terminal	TAPE OUT(L) or SP OUT(L)	98MHz	VR106	Adjust VR106 so that a signal can occur then the input signal is 24±6dB.

CAUTION

(1) At the article 1 - (2). By the core of T101, T102, T103 and T105 let it be adjusted so that the gain will be max. And the wave form should be adjusted so that it will be the one of the Fig.5. In this case, the output voltage at the surveying point of TP.2 is weak, so let it be adjusted by connecting shown at Fig. 6, using V.T.V.M.
Next, adjust it by T109 core, so that the wave form of Fig.5 will dip just as Fig.7 and at this time of adjustment stop the oscillation. (Oscillation variable capacitor is shorted.)

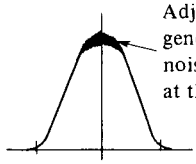


Fig. 5

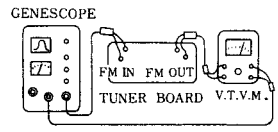


Fig. 6

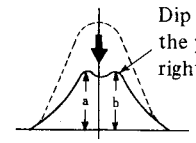


Fig. 7

(2) At the article 1 - (3). Adjust so that it will be just as S curve of Fig. 8 with the secondary core (upper) of T107. And by the primary core (lower) of the T107, adjust it so that the gain will be max. In this case, A and B will be at the symmetry position of C, and adjust it as the straight line can be gained.
At the time of adjustment of Caution (1) and (2), we use ceramic filter, so the center of the marker will not sometimes come on that of wave form. In this case, neglect the marker.

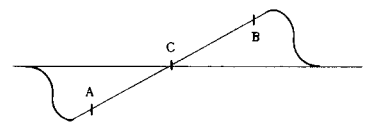


Fig. 8

5.2 FM MPX ALIGNMENT

Steps		Item	Measuring Instrument	Input Terminal	Output Terminal	Frequency	Adjust	Wave Form
1							VR107	Set the VR107 in the center.
2	(1)	19kHz 38kHz Tuning coil	FM signal generator 60dB at input Stereo signal generator pilot signal (19kHz) 8% modulated V.T.V.M.	Antenna terminal	TP 5	100MHz	L106, L109	Adjust L106 and L109 so that 19kHz output wave form becomes max.
	(2)				TP 6		L107	Adjust L107 so that the (38kHz) output wave form becomes max.
3	(1)	Separation	1. FM signal generator 100MHz, 60dB at input 2. Stereo signal generator Main signal 92% modulated Pilot signal 8% modulated V.T.V.M.	Antenna terminal	FM OUT(L) or SP OUT(L)	100MHz		Set the tuning knob so that pointer of meter will become max.
	(2)						L109	After making the signal of L ch and Pilot, adjust L109 so that the output wave form of L ch becomes max.
	(3)						VR102	After making the signal of R ch and Pilot, adjust VR-102 so that the output wave form of L ch becomes min.
	(4)							Optimize VR102 so that the leak level of the L ch signal is equal to that of the R ch signal.
4		Lighting Level of STEREO Indicator Lamp	FM signal generator 100MHz 60dB at input Stereo signal generator pilot signal (19kHz) 5% modulated.	Antenna terminal	STEREO Indicator Lamp	100MHz	VR107	Adjust VR107 so that stereo indicator lamp will be lighted when the modulation degree of pilot signal is 5%.

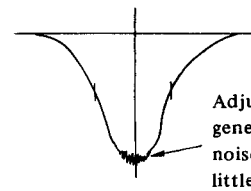
5.3 AM TUNER ALIGNMENT

Steps		Item	Measuring Instrument	Input Terminal	Output Terminal	Frequency	Adjust	Wave Form
1		IF Amplifier	Sweep generator 455kHz	Antenna terminal	TP 4		T104, T108	Gain Max. CAUTION (3)
2	(1)	Covering	AM signal generator 600kHz 400Hz 30% modulated, 50dB at input V.T.V.M.	Ferrite antenna	TAPE OUT or SP OUT	600kHz	L108	Gain Max. CAUTION (4)
	(2)		AM signal generator 1400kHz 400Hz 30% modulated, 50dB at input V.T.V.M.			1400kHz	TC105	
	(3)							Repeat (1) and (2)
3	(1)	Tracking	AM signal generator 600kHz 400Hz 30% modulated, 50dB at input V.T.V.M.	Ferrite antenna	TAPE OUT or SP OUT	600kHz	Ferrite antenna	Gain Max. CAUTION (4)
	(2)		AM signal generator 1400kHz 400Hz 30% modulated, 50dB at input V.T.V.M.			1400kHz	TC104	
	(3)							Repeat (1) and (2)
4		Tuning Meter	AM signal generator 1000kHz 400Hz 30% modulated, 74dB at input	Ferrite antenna	TAPE OUT or SP OUT	1000kHz	VR104	Adjust VR104 so that pointer of meter will be 3.2.
5		Output	AM signal generator 1000kHz 400Hz 30% modulated, 74dB at input V.T.V.M.	Ferrite antenna	TAPE OUT	1000kHz	VR103	Adjust VR103 so that the output becomes 200mV±2dB.

CAUTION

(3) At the article 1, adjust T104 and T108, so that the wave form will be as in Fig. 9. As T108 contains ceramic filter of 455kHz sometimes the center of the marker will not come on that of the wave form. In this case, neglect the marker.

(4) At the article 2 and 3, at the time of the first adjustment, make input power at 74dB and as the adjustment goes on, make it the minimum and necessary input power (50dB).



Adjust the output of genescope so that the noise will be out a little at the tip.

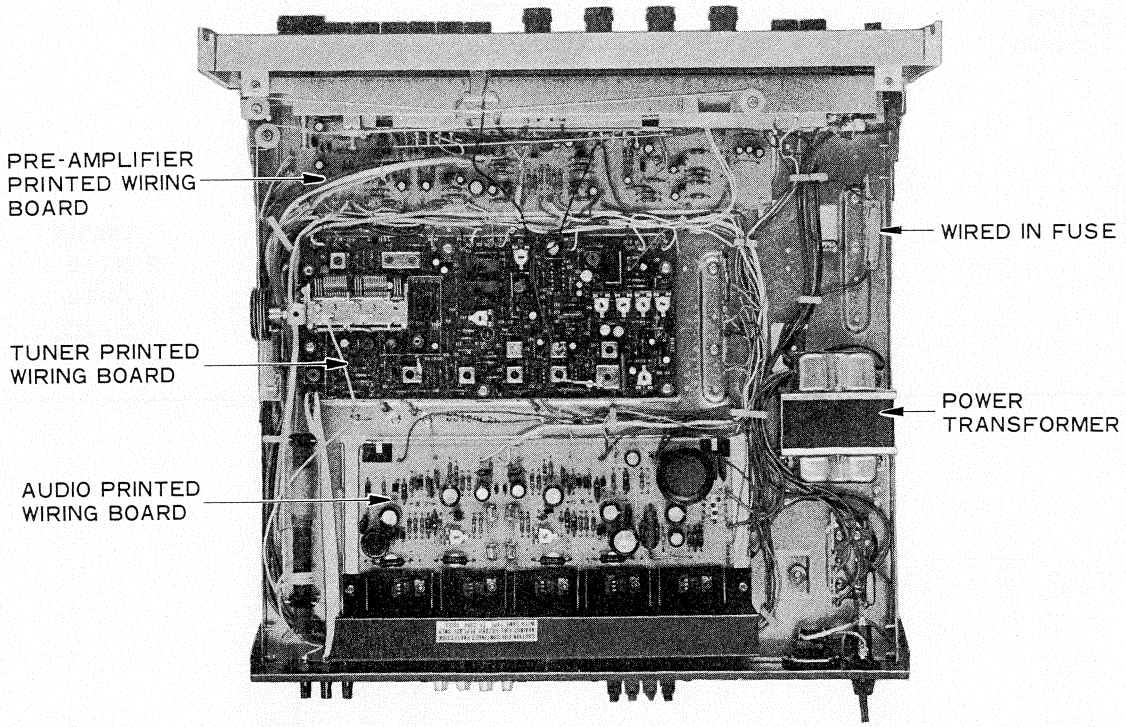
Fig. 9

5.4 AUDIO CIRCUIT ALIGNMENT

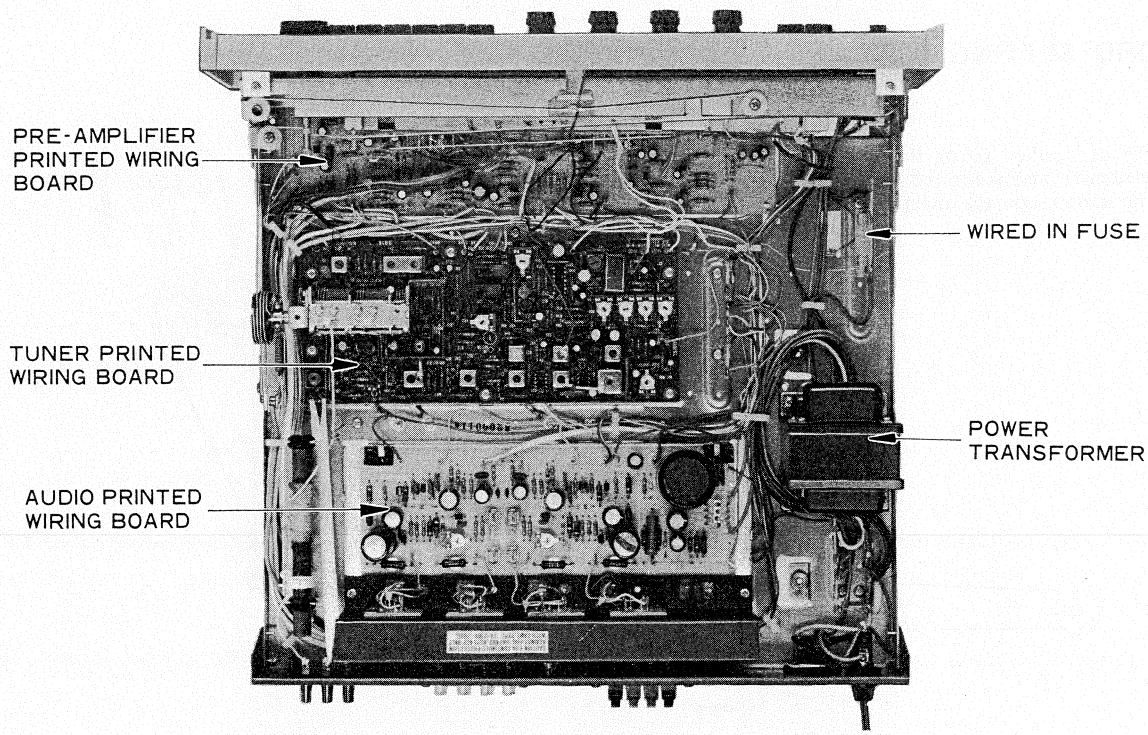
Steps	Item	Measuring Instrument	Point to be Measured	Adjust	Value Adjusted
1	Idle Current	DC volt meter	connect (+) terminal of DC volt meter to TP L connect (–) terminal of DC volt meter to TP L(E)	VR 701L	Steady state: 20 ± 2.5mV
		VR701R(TP R, TP R(E)): Adjust similarly			

6. CHASSIS LAYOUT

SR-3200



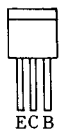
SR-5200



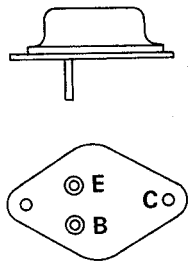
7. TERMINAL GUIDE OF TRANSISTORS, FET & IC

2SC461
2SC458
2SC458LG
2SC460
2SC454

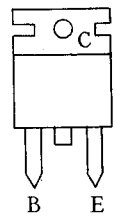
2SA673A
2SA673AS
2SC1213A
2SC535
2SC1345



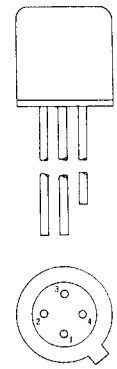
2SC1030



2SC1060

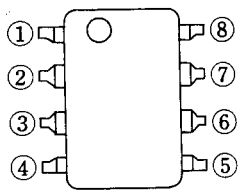


3SK45

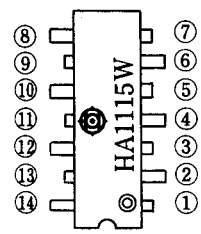


1. DRAIN
2. GATE 2
3. GATE 1
4. SOURCE

HA1201
HA1202

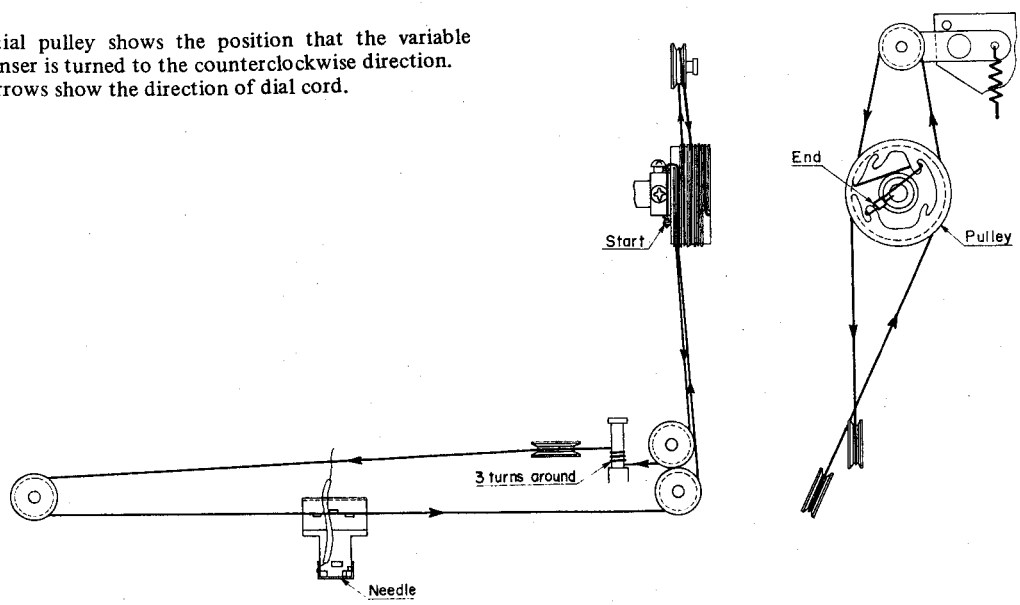


HA1115W



8. DIAL CORD SETTING

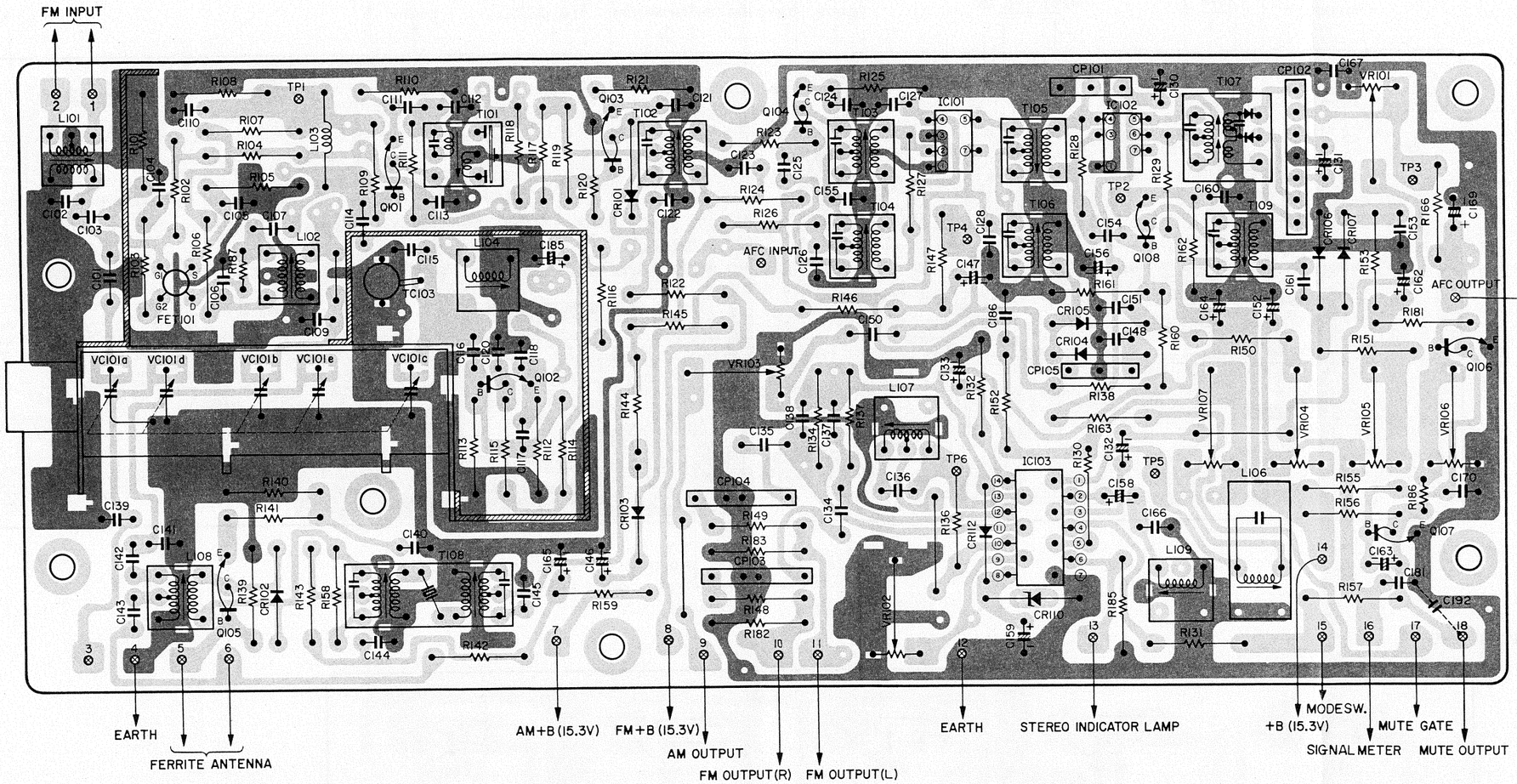
Note: 1. The dial pulley shows the position that the variable condenser is turned to the counterclockwise direction.
2. The arrows show the direction of dial cord.



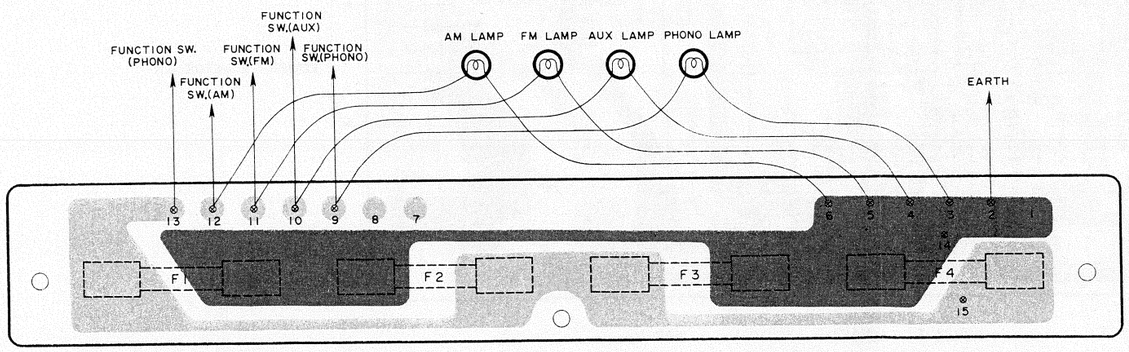
9. PRINTED WIRING BOARD

TUNER PRINTED WIRING BOARD

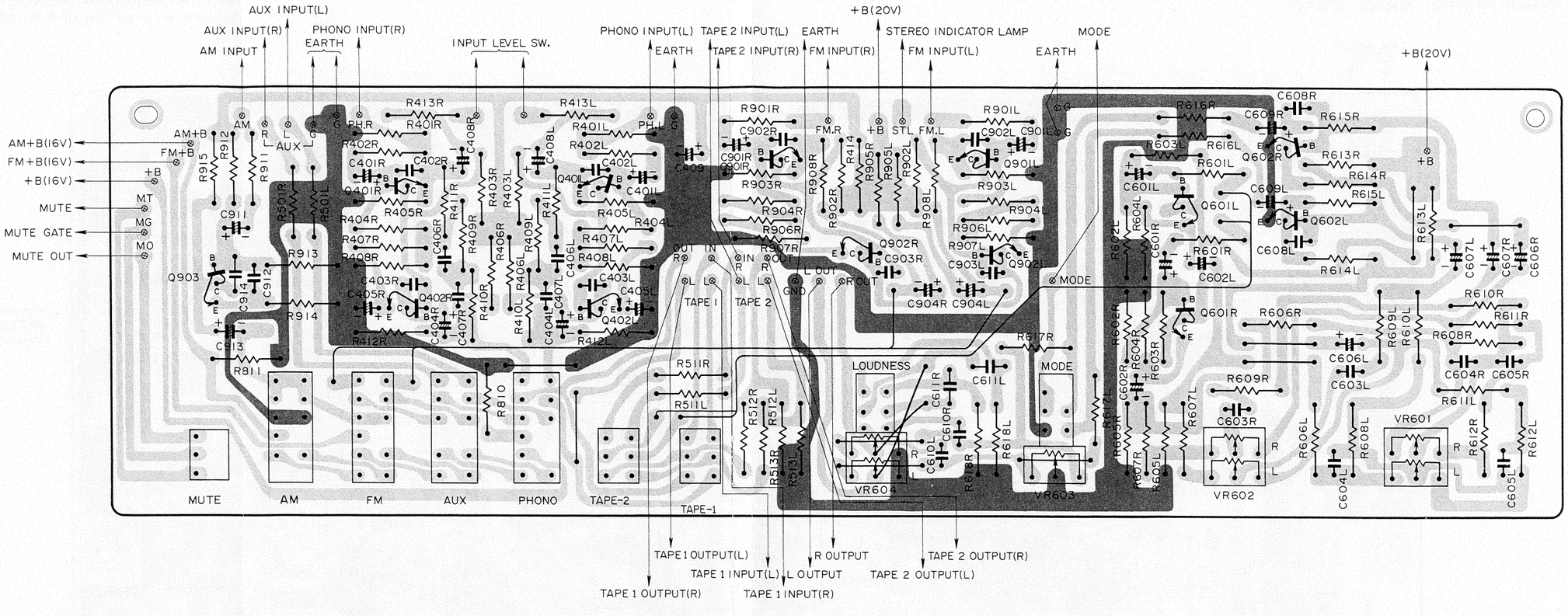
Really on the base-plate, the printed symbol number is shown with two figures, but not all of them. This means the first figure is shortened. When it is needed to know the symbol number, please check the plan of base-plate and circuit diagram in this service manual.



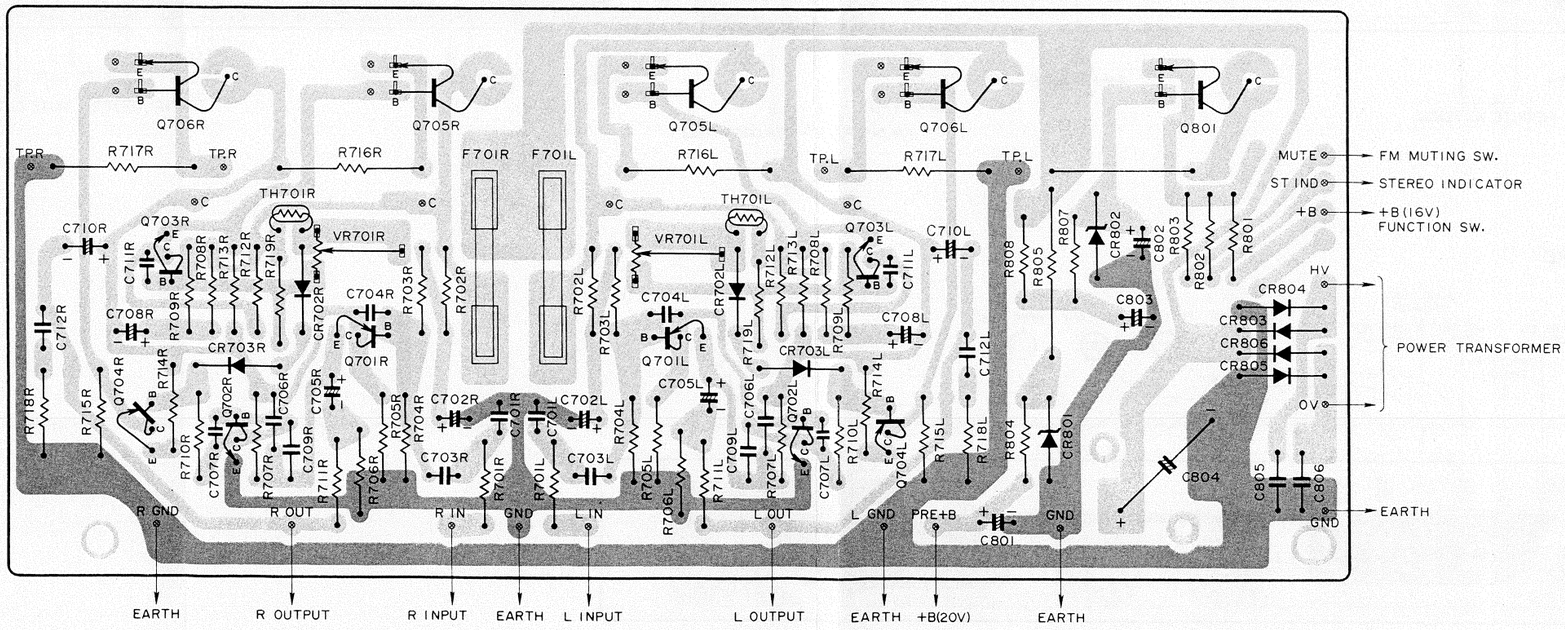
LAMP PRINTED WIRING BOARD



PRE-AMPLIFIER PRINTED WIRING BOARD

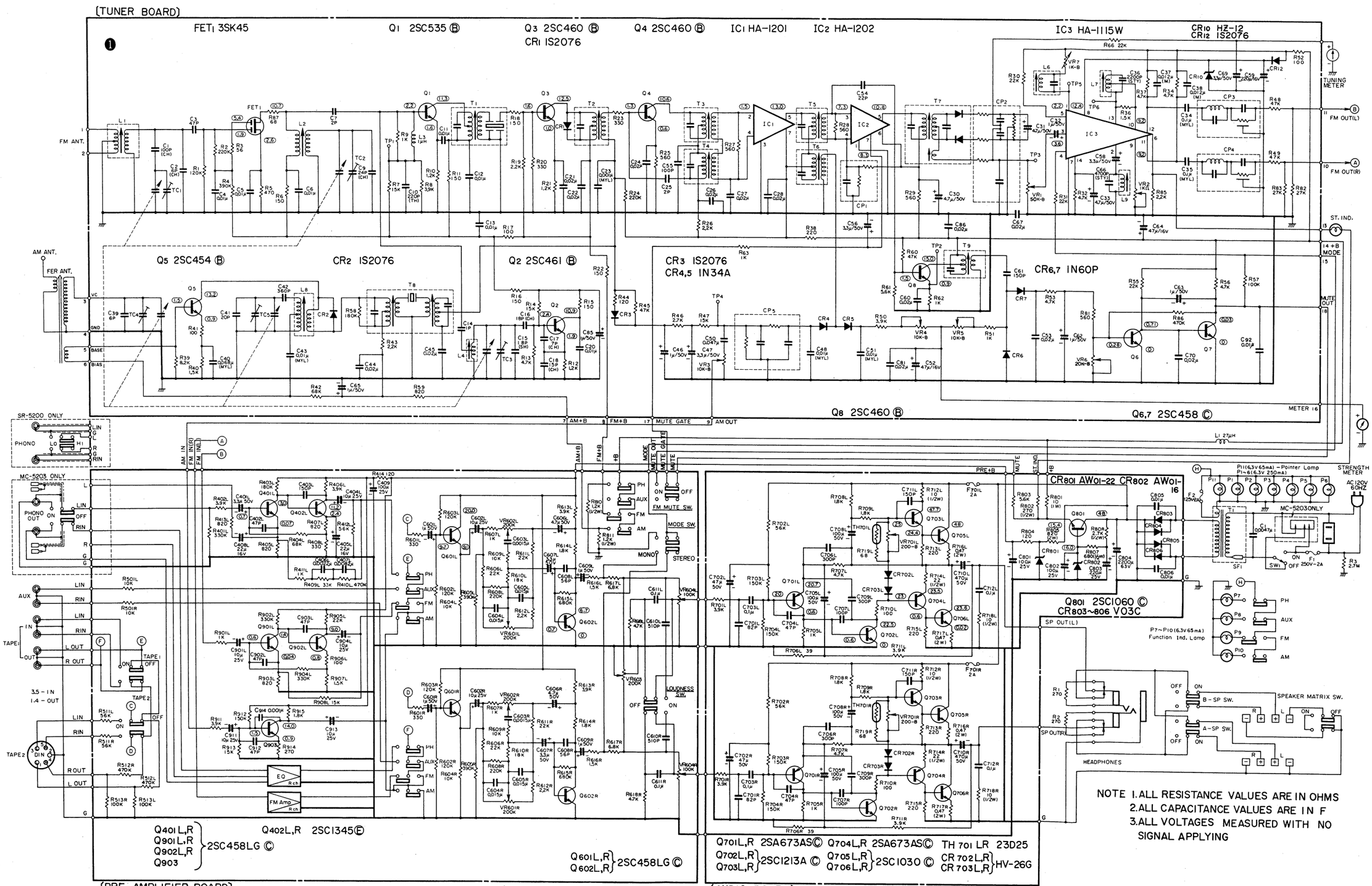


AUDIO PRINTED WIRING BOARD



10. CIRCUIT DIAGRAM

(This is a circuit diagram of Model SR-5200.
The difference between SR-3200 and SR-5200 is shown page 2.)



NOTE 1. ALL RESISTANCE VALUES ARE IN OHMS
2. ALL CAPACITANCE VALUES ARE IN F
3. ALL VOLTAGES MEASURED WITH NO SIGNAL APPLYING

The circuit diagram is subject to change for improvement without notice.

11. REPLACEMENT PARTS LIST

CAPACITORS

for TUNER PRINTED WIRING BOARD

SYMBOL NO.	STOCK NO.	DESCRIPTION		
C101	0246464	Ceramic, discal	100pF±5%	50V
C102	0246416	Ceramic, discal	6pF±0.25%	50V
C103	0248676	Ceramic, discal	47pF±5%	50V
C104	0245017	Ceramic, discal	10000pF $^{+80}_{-20}$%	25V
C105	0245017	Ceramic, discal	10000pF $^{+80}_{-20}$%	25V
C106	0245017	Ceramic, discal	10000pF $^{+80}_{-20}$%	25V
C107	0248632	Ceramic, discal	2pF±0.25%	50V
C109	0246449	Ceramic, discal	24pF±5%	50V
C110	0248362	Ceramic, discal	220pF±5%	50V
C111	0245017	Ceramic, discal	10000pF $^{+80}_{-20}$%	25V
C112	0245017	Ceramic, discal	10000pF $^{+80}_{-20}$%	25V
C113	0245017	Ceramic, discal	10000pF $^{+80}_{-20}$%	25V
C114	0248631	Ceramic, discal	1pF±0.25%	50V
C115	0248176	Ceramic, discal	18pF±5%	50V
C116	0248176	Ceramic, discal	18pF±5%	50V
C117	0246417	Ceramic, discal	7pF±0.25%	50V
C118	0246444	Ceramic, discal	15pF±5%	50V
C120	0245017	Ceramic, discal	10000pF $^{+80}_{-20}$%	50V
C121	0245018	Ceramic, discal	20000pF $^{+80}_{-20}$%	25V
C122	0245018	Ceramic, discal	20000pF $^{+80}_{-20}$%	25V
C123	0274011	Mylar, film	1000pF ±10%	50V
C124	0245018	Ceramic, discal	20000pF $^{+80}_{-20}$%	25V
C125	0248632	Ceramic, discal	2pF±0.25%	50V
C126	0245018	Ceramic, discal	20000pF $^{+80}_{-20}$%	25V
C127	0245018	Ceramic, discal	20000pF $^{+80}_{-20}$%	25V
C128	0245018	Ceramic, discal	20000pF $^{+80}_{-20}$%	25V
C130	0252815	Electrolytic	4.7μF	50V
C131	0252815	Electrolytic	4.7μF	50V
C132	0252811	Electrolytic	1μF	50V
C133	0252815	Electrolytic	4.7μF	50V
C134	0276011	Mylar, film	0.1μF±10%	50V
C135	0276011	Mylar, film	0.1μF±10%	50V
C136	0228343	Styrol	2200pF±5%	50V
C137	0275031	Mylar, film	12000pF±10%	50V
C138	0275031	Mylar, film	12000pF±10%	50V
C139	0248636	Ceramic, discal	6pF±0.25%	50V
C140	0275016	Mylar, film	0.068μF±10%	50V
C141	0248667	Mylar, film	20pF±5%	50V
C142	0228324	Styrol	360pF±5%	50V
C143	0275011	Mylar, film	10000pF±10%	50V
C144	0245018	Ceramic, discal	20000pF $^{+80}_{-20}$%	25V
C145	0245018	Ceramic, discal	20000pF $^{+80}_{-20}$%	25V
C146	0252811	Electrolytic	1μF	50V
C147	0252813	Electrolytic	3.3μF	50V
C148	0275011	Mylar, film	10000pF±10%	50V
C150	0275015	Mylar, film	0.047μF±10%	50V
C151	0275011	Mylar, film	10000pF±10%	50V
C152	0252525	Electrolytic	47μF	16V
C153	0245018	Ceramic, discal	20000pF $^{+80}_{-20}$%	25V
C154	0248668	Ceramic, discal	22pF±5%	50V
C155	0248724	Ceramic, discal	100pF±5%	50V
C156	0252813	Electrolytic	3.3μF	50V
C158	0252813	Electrolytic	3.3μF	50V
C159	0252532	Electrolytic	220μF	16V
C160	0245018	Ceramic, discal	20000pF $^{+80}_{-20}$%	25V
C161	0248728	Ceramic, discal	150pF±10%	50V
C162	0252811	Electrolytic	1μF	50V
C163	0252811	Electrolytic	1μF	50V
C164	0252525	Electrolytic	47μF	16V
C165	0252811	Electrolytic	1μF	50V
C166	0221513	Styrol	4700pF±5%	50V
C167	0245018	Ceramic, discal	20000pF $^{+80}_{-20}$%	25V
C169	0252813	Electrolytic	3.3μF	50V
C170	0245018	Ceramic, discal	20000pF $^{+80}_{-20}$%	25V
C181	0245018	Ceramic, discal	20000pF $^{+80}_{-20}$%	25V
C185	0252811	Electrolytic	1μF	50V
C186	0245018	Ceramic, discal	20000pF $^{+80}_{-20}$%	25V
C192	0245017	Ceramic, discal	10000pF $^{+80}_{-20}$%	25V

for PRE-AMPLIFIER PRINTED WIRING BOARD

C401(L, R)	0252813	Electrolytic	3.3μF	50V
C402(L, R)	0248676	Ceramic, discal	47pF±5%	50V
C403(L, R)	0248728	Ceramic, discal	150pF±10%	50V
C404(L, R)	0252621	Electrolytic	10μF	25V
C405(L, R)	0252522	Electrolytic	22μF	16V
C406(L, R)	0274013	Mylar, film	2200pF±10%	25V
C407(L, R)	0274036	Mylar, film	0.0082μF±10%	50V
C408(L, R)	0252522	Electrolytic	22μF	16V
C409	0252631	Electrolytic	100μF	25V
C601(L, R)	0252811	Electrolytic	1μF	50V
C602(L, R)	0252621	Electrolytic	10μF	25V
C603(L, R)	0274012	Mylar, film	1500pF ±10%	50V
C604(L, R)	0275012	Mylar, film	0.015μF±10%	50V
C605(L, R)	0275012	Mylar, film	0.015μF±10%	50V
C606(L, R)	0252815	Electrolytic	4.7μF	50V
C607(L, R)	0252813	Electrolytic	3.3μF	50V
C608(L, R)	0248718	Ceramic, discal	56pF±10%	50V
C609(L, R)	0252811	Electrolytic	1μF	50V
C610(L, R)	0228328	Styrol	510pF ±5%	50V
C611(L, R)	0276011	Mylar, film	0.1μF±10%	50V
C901(L, R)	0252621	Electrolytic	10μF	25V
C902(L, R)	0248676	Ceramic, discal	47pF±5%	50V
C903(L, R)	0248676	Ceramic, discal	47pF±5%	50V
C904(L, R)	0252621	Electrolytic	10μF	25V
C911	0252621	Electrolytic	10μF	25V
C912	0248676	Ceramic, discal	47pF±5%	50V
C913	0252621	Electrolytic	10μF	25V
C914	0274011	Mylar, film	1000pF±10%	50V

for AUDIO PRINTED WIRING BOARD

C701(L, R)	0248722	Ceramic, discal	82pF± 10%	50V
C702(L, R)	0252825	Electrolytic	47μF	50V
C703(L, R)	0276011	Mylar, film	0.1μF±10%	50V
C704(L, R)	0248676	Ceramic, discal	47pF±5%	50V
C705(L, R)	0252831	Electrolytic	100μF	50V
C706(L, R)	0248695	Ceramic, discal	300pF±5%	50V
C707(L, R)	0248724	Ceramic, discal	100pF±10%	50V
C708(L, R)	0252831	Electrolytic	100μF	50V
C709(L, R)	0248695	Ceramic, discal	300pF±5%	50V
C710(L, R)	0252835	Electrolytic	470μF	50V
C711(L, R)	0248728	Ceramic, discal	150pF±10%	50V
C712(L, R)	0276011	Mylar, film	0.1μF±10%	50V
C801	0252631	Electrolytic	100μF	25V
C802	0252631	Electrolytic	100μF	25V
C803	0252632	Electrolytic	220μF	25V
C804	0250139	Electrolytic	2200μF	63V
C805	0245408	Ceramic, discal	0.01μF±20%	500V
C806	0245408	Ceramic, discal	0.01μF±20%	500V

for CHASSIS ASSEMBLY

C1	0243873	Ceramic, discal	0.0047μF $^{+80}_{-20}$%	500V (UL)

RESISTORS

for TUNER PRINTED WIRING BOARD

SYMBOL NO.	STOCK NO.	DESCRIPTION		
R101	0114283	Carbon film	120 kΩ ±5%	SRD¼P
R102	0114289	Carbon film	220 kΩ ±5%	SRD¼P
R103	0114059	Carbon film	56 Ω±5%	SRD¼P
R104	0114295	Carbon film	390 kΩ±5%	SRD¼P
R105	0114147	Carbon film	470 Ω ±5%	SRD¼P
R106	0114135	Carbon film	150 Ω ±5%	SRD¼P
R107	0114205	Carbon film	15 kΩ ±5%	SRD¼P
R108	0114175	Carbon film	3.9 kΩ ±5%	SRD¼P
R109	0114161	Carbon film	1 kΩ±5%	SRD¼P
R110	0114163	Carbon film	1.2 kΩ ±5%	SRD¼P
R111	0114135	Carbon film	150 Ω ±5%	SRD¼P
R112	0114163	Carbon film	1.2 kΩ±5%	SRD¼P
R113	0114177	Carbon film	4.7 kΩ±5%	SRD¼P
R114	0114205	Carbon film	15 kΩ ±5%	SRD¼P
R115	0114135	Carbon film	150Ω ±5%	SRD¼P
R116	0114135	Carbon film	150Ω ±5%	SRD¼P
R117	0114131	Carbon film	100Ω ±5%	SRD¼P
R118	0114135	Carbon film	150Ω ±5%	SRD¼P
R119	0114169	Carbon film	2.2kΩ ±5%	SRD¼P
R120	0114143	Carbon film	330Ω ±5%	SRD¼P
R121	0114163	Carbon film	1.2kΩ ±5%	SRD¼P
R122	0114135	Carbon film	150Ω ±5%	SRD¼P
R123	0114143	Carbon film	330Ω ±5%	SRD¼P
R124	0114289	Carbon film	220kΩ ±5%	SRD¼P
R125	0114149	Carbon film	560Ω ±5%	SRD¼P
R126	0114169	Carbon film	2.2kΩ ±5%	SRD¼P
R127	0114149	Carbon film	560Ω ±5%	SRD¼P
R128	0114149	Carbon film	560Ω ±5%	SRD¼P
R129	0114149	Carbon film	560Ω ±5%	SRD¼P
R130	0114209	Carbon film	22kΩ ±5%	SRD¼P
R131	0114209	Carbon film	22kΩ ±5%	SRD¼P
R132	0114177	Carbon film	4.7kΩ ±5%	SRD¼P
R134	0114177	Carbon film	4.7kΩ ±5%	SRD¼P
R136	0114165	Carbon film	1.5kΩ ±5%	SRD¼P
R137	0114177	Carbon film	4.7kΩ ±5%	SRD¼P
R138	0114139	Carbon film	220Ω ±5%	SRD¼P
R139	0114183	Carbon film	8.2kΩ ±5%	SRD¼P
R140	0114165	Carbon film	1.5kΩ ±5%	SRD¼P
R141	0114131	Carbon film	100Ω ±5%	SRD¼P
R142	0114221	Carbon film	68kΩ ±5%	SRD¼P
R143	0114169	Carbon film	2.2kΩ ±5%	SRD¼P
R144	0114133	Carbon film	120Ω ±5%	SRD¼P
R145	0114217	Carbon film	47kΩ ±5%	SRD¼P
R146	0114171	Carbon film	2.7kΩ ±5%	SRD¼P
R147	0114205	Carbon film	15kΩ ±5%	SRD¼P
R148	0114217	Carbon film	47kΩ ±5%	SRD¼P
R149	0114217	Carbon film	47kΩ ±5%	SRD¼P
R150	0114175	Carbon film	3.9kΩ ±5%	SRD¼P
R151	0114161	Carbon film	1kΩ ±5%	SRD¼P
R152	0114131	Carbon film	100Ω ±5%	SRD¼P
R153	0114177	Carbon film	4.7kΩ ±5%	SRD¼P
R155	0114209	Carbon film	22kΩ ±5%	SRD¼P
R156	0114177	Carbon film	4.7kΩ ±5%	SRD¼P
R157	0114281	Carbon film	100kΩ ±5%	SRD¼P
R158	0114287	Carbon film	180kΩ ±5%	SRD¼P
R159	0114153	Carbon film	820Ω ±5%	SRD¼P
R160	0114217	Carbon film	47kΩ ±5%	SRD¼P
R161	0114179	Carbon film	5.6kΩ ±5%	SRD¼P
R162	0114161	Carbon film	1kΩ ±5%	SRD¼P
R163	0114161	Carbon film	1kΩ ±5%	SRD¼P
R166	0114209	Carbon film	22kΩ ±5%	SRD¼P
R181	0114149	Carbon film	560Ω ±5%	SRD¼P
R182	0114211	Carbon film	27kΩ ±5%	SRD¼P
R183	0114211	Carbon film	27kΩ ±5%	SRD¼P
R185	0114169	Carbon film	2.2kΩ ±5%	SRD¼P
R186	0138217	Carbon film	470kΩ ±5%	SRD¼ SD
R187	0138061	Carbon film	68Ω ±5%	SRD¼ SD

for PRE-AMPLIFIER PRINTED WIRING BOARD

R401(L, R)	0114293	Carbon film	330kΩ ±5%	SRD¼P
R402(L, R)	0114175	Carbon film	3.9kΩ ±5%	SRD¼P
R403(L, R)	0114287	Carbon film	180kΩ ±5%	SRD¼P
R404(L, R)	0114221	Carbon film	68kΩ ±5%	SRD¼P
R405(L, R)	0114153	Carbon film	820Ω ±5%	SRD¼P
R406(L, R)	0114175	Carbon film	3.9kΩ ±5%	SRD¼P
R407(L, R)	0114153	Carbon film	820Ω ±5%	SRD¼P
R408(L, R)	0114143	Carbon film	330Ω ±5%	SRD¼P
R409(L, R)	0114213	Carbon film	33kΩ ±5%	SRD¼P
R410(L, R)	0138217	Carbon film	470kΩ ±5%	SRD¼SD
R411(L, R)	0114161	Carbon film	1kΩ ±5%	SRD¼P
R412(L, R)	0114219	Carbon film	56kΩ ±5%	SRD¼P
R413(L, R)	0114153	Carbon film	820Ω ±5%	SRD¼P
R414	0114133	Carbon film	120Ω ±5%	SRD¼P
R501(L, R)	0114201	Carbon film	10kΩ ±5%	SRD¼P
R511(L, R)	0114219	Carbon film	56kΩ ±5%	SRD¼P
R512(L, R)	0138217	Carbon film	470kΩ ±5%	SRD¼ SD
R513(L, R)	0114281	Carbon film	100kΩ ±5%	SRD¼P
R601(L, R)	0114143	Carbon film	330Ω ±5%	SRD¼P
R602(L, R)	0114283	Carbon film	120kΩ ±5%	SRD¼P
R603(L, R)	0114283	Carbon film	120kΩ ±5%	SRD¼P
R604(L, R)	0114201	Carbon film	10kΩ ±5%	SRD¼P
R605(L, R)	0114295	Carbon film	390kΩ ±5%	SRD¼P
R606(L, R)	0114209	Carbon film	22kΩ ±5%	SRD¼P
R607(L, R)	0114161	Carbon film	1kΩ ±5%	SRD¼P
R608(L, R)	0114289	Carbon film	220kΩ ±5%	SRD¼P
R609(L, R)	0114201	Carbon film	10kΩ ±5%	SRD¼P
R610(L, R)	0114207	Carbon film	18kΩ ±5%	SRD¼P
R611(L, R)	0114209	Carbon film	22kΩ ±5%	SRD¼P
R612(L, R)	0114169	Carbon film	2.2kΩ ±5%	SRD¼P
R613(L, R)	0114175	Carbon film	3.9kΩ ±5%	SRD¼P
R614(L, R)	0114167	Carbon film	1.8kΩ ±5%	SRD¼P
R615(L, R)	0114301	Carbon film	680kΩ ±5%	SRD¼P
R616(L, R)	0114165	Carbon film	1.5kΩ ±5%	SRD¼P
R617(L, R)	0114181	Carbon film	6.8kΩ ±5%	SRD¼P
R618(L, R)	0114177	Carbon film	4.7kΩ ±5%	SRD¼P
R810	0134374	Composition	1.2kΩ ±10%	RC½GF
R811	0134374	Composition	1.2kΩ ±10%	RC½GF
R901(L, R)	0114161	Carbon film	1kΩ ±5%	SRD¼P
R902(L, R)	0114293	Carbon film	330kΩ ±5%	SRD¼P
R903(L, R)	0114153	Carbon film	820Ω ±5%	SRD¼P
R904(L, R)	0114293	Carbon film	330kΩ ±5%	SRD¼P
R905(L, R)	0114209	Carbon film	22kΩ ±5%	SRD¼P
R906(L, R)	0114131	Carbon film	100Ω ±5%	SRD¼P
R907(L, R)	0114165	Carbon film	1.5kΩ ±5%	SRD¼P
R908(L, R)	0114205	Carbon film	15kΩ ±5%	SRD¼P
R911	0114175	Carbon film	3.9kΩ ±5%	SRD¼P
R912	0114285	Carbon film	150kΩ ±5%	SRD¼P
R913	0114205	Carbon film	15kΩ ±5%	SRD¼P
R914	0114141	Carbon film	270Ω ±5%	SRD¼P

NOTE: * marked parts used for SR-3200
o marked parts used for SR-5200

SYMBOL NO.	STOCK NO.	DESCRIPTION		
R915	0114167	Carbon film	1.8kΩ±5%	SRD¼P
for AUDIO PRINTED WIRING BOARD				
R701(L, R)	0114175	Carbon film	3.9kΩ±5%	SRD¼P
R702(L, R)	0114219	Carbon film	56kΩ±5%	SRD¼P
R703(L, R)	0114285	Carbon film	150kΩ±5%	SRD¼P
R704(L, R)	0114285	Carbon film	150kΩ±5%	SRD¼P
R705(L, R)	0114161	Carbon film	1kΩ±5%	SRD¼P
R706(L, R)	0114055	Carbon film	39Ω±5%	SRD¼P
R707(L, R)	0114177	Carbon film	4.7kΩ±5%	SRD¼P
R708(L, R)	0114167	Carbon film	1.8kΩ±5%	SRD¼P
R709(L, R)	0114167	Carbon film	1.8kΩ±5%	SRD¼P
R710(L, R)	0114131	Carbon film	100Ω±5%	SRD¼P
*R711(L, R)	0114171	Carbon film	2.7kΩ±5%	SRD¼P
oR711(L, R)	0114175	Carbon film	3.9kΩ±5%	SRD¼P
R712(L, R)	0134289	Composition	10Ω±10%	RC½GF
R713(L, R)	0114139	Carbon film	220Ω±5%	SRD¼P
R714(L, R)	0134293	Composition	22Ω±10%	RC½GF
R715(L, R)	0114139	Carbon film	220Ω±5%	SRD¼P
R716(L, R)	0119127	Metal	0.47Ω±10%	RN2P
R717(L, R)	0119127	Metal	0.47Ω±10%	RN2P
R718(L, R)	0134289	Composition	10Ω±10%	RC½GF
R719(L, R)	0114061	Carbon film	68Ω±5%	SRD¼P
R801	0119041	Metal	10Ω±10%	RN1P
R802	0134366	Composition	270Ω±10%	RC½GF
R803	0114179	Carbon film	5.6kΩ±5%	SRD¼P
R804	0114133	Carbon film	120Ω±5%	SRD¼P
*R805	0111415	Metal oxide	560Ω±10%	RD2PA
oR805	0111417	Metal oxide	820Ω±10%	RD2PA
R807	0134371	Composition	680Ω±10%	RC½GF
*R808	0134377	Composition	2.2kΩ±10%	RC½GF
oR808	0134378	Composition	2.7kΩ±10%	RC½GF
for CHASSIS ASSEMBLY				
R1	0134366	Composition	270Ω±10%	RC½GF
R2	0134366	Composition	270Ω±10%	RC½GF
R3	0139005	Composition	2.7MΩ±10%	RC½GF

TRANSISTORS

for TUNER PRINTED WIRING BOARD

FET101	2327431	3SK45
IC101	2327312	HA1201
IC102	2327411	HA1202
IC103	2327422	HA1115 (W)
Q101	0573510	2SC535 (B)
Q102	0573507	2SC461 (B)
Q103	0573486	2SC460 (B)
Q104	0573486	2SC460 (B)
Q105	0573491	2SC454 (B)
Q106	2320063	2SC458 (C)
Q107	2320063	2SC458 (C)
Q108	0573486	2SC460 (B)

for PRE-AMPLIFIER PRINTED WIRING BOARD

Q401(L, R)	2320073	2SC458LG (C)
Q402(L, R)	2327363	2SC1345 (E)
Q601(L, R)	2320073	2SC458LG (C)
Q602(L, R)	2320073	2SC458LG (C)
Q901(L, R)	2320073	2SC458LG (C)
Q902(L, R)	2320073	2SC458LG (C)

SYMBOL NO.	STOCK NO.	DESCRIPTION
Q903	2320073	2SC458LG (C)
for AUDIO PRINTED WIRING BOARD		
*Q701(L, R)	2327283	2SA673A (C)
oQ701(L, R)	2327387	2SA673AS (C)
Q702(L, R)	2327293	2SC1213A (C)
Q703(L, R)	2327293	2SC1213A (C)
*Q704(L, R)	2327283	2SA673A (C)
oQ704(L, R)	2327387	2SA673AS (C)
*Q705(L, R)	2327203	2SC1060 (C)
oQ705(L, R)	2327053	2SC1030 (C)
*Q706(L, R)	2327203	2SC1060 (C)
oQ706(L, R)	2327053	2SC1030 (C)
Q801	2327203	2SC1060(C)

DIODES

for TUNER PRINTED WIRING BOARD

CR101	2337011	1S2076
CR102	2337011	1S2076
CR103	2337011	1S2076
CR104	0575002	1N34A
CR105	0575002	1N34A
CR106	0575019	1N60 (P)
CR107	0575019	1N60 (P)
CR110	2337101	HZ-12(A)
CR112	2337011	1S2076

for AUDIO PRINTED WIRING BOARD

CR702(L, R)	2337071	HV-26G
CR703(L, R)	2337071	HV-26G
CR801	2337063	AWO1-22
CR802	2337065	AWO1-16
CR803	2327031	VO3C
CR804	2327031	VO3C
CR805	2327031	VO3C
CR806	2327031	VO3C
TH701(L, R)	0576041	23D25

VARIABLE RESISTORS

for TUNER PRINTED WIRING BOARD

VR101	0151225	50kΩ - (B)
VR102	0151282	1kΩ - (B)
VR103	0151224	10kΩ - (B)
VR104	0151224	10kΩ - (B)
VR105	0151224	10kΩ - (B)
VR106	0151281	20kΩ - (B)
VR107	0151282	1kΩ - (B)

for PRE-AMPLIFIER PRINTED WIRING BOARD

VR601(L, R)	0151710	200kΩ - (B) × 2
VR602(L, R)	0151710	200kΩ - (B) ×2
VR603	0151708	200kΩ - (W)
VR604(L, R)	0151709	100kΩ- (B) × 2

for AUDIO PRINTED WIRING BOARD

*VR701(L, R)	0151256	300Ω - (B) × 2
oVR701(L, R)	0151223	200Ω - (B) × 2

SYMBOL NO.	STOCK NO.	DESCRIPTION
COILS & TRANSFORMERS		
for TUNER PRINTED WIRING BOARD		
L101	2134411	FM antenna coil
L102	2134419	FM RF coil
L103	2227081	Choke coil (1μH)
L104	2134416	FM OSC coil
L106	2134392	19kHz coil
L107	2134373	38kHz coil
L108	2134431	AM OSC coil
L109	2134371	19kHz coil
T101	2154172	FM IF transformer
T102	0322203	FM IF transformer
T103	2154199	FM IF transformer
T104	2154161	AM IF transformer
T105	0322203	FM IF transformer
T106	2154122	AM IF transformer
T107	2140242	FM discriminator
T108	2154183	AM IF transformer
T109	2140155	FM IF transformer
for CHASSIS ASSEMBLY		
L1	2227035	Choke coil (27μH)
MISCELLANEOUS		
	2519194	TUNER printed wiring board assembly
	2519381	PRE-AMPLIFIER printed wiring board assembly
	2519321	AUDIO printed wiring board assembly (for SR-3200)
	2519322	AUDIO printed wiring board assembly (for SR-5200)
	2519251	LAMP printed wiring board assembly
CP101	0186022	CR multiple component
CP102	0186041	CR multiple component
CP103	0186011	CR multiple component
CP104	0186011	CR multiple component
CP105	0186031	CR multiple component
VC101	0281169	FM AM variable capacitor
TC103	0283115	Trimmer capacitor
F701L,R,F1	2727221	Fuse-fuse (2A, FAST)(UL)
	2727081	Fuse-wired in fuse (2A, SLOW)(UL)
	2217582	Power transformer (for SR-3200)
	2217591	Power transformer (for SR-5200)
	2637323	Switch-push switch (for power sw.)
	2637441	Switch-push switch (for speaker sw.)
	2637431	Switch-push switch (for function sw. others)
	2627012	Switch-slide switch (for input level sw. speaker matrix sw.)

SYMBOL NO.	STOCK NO.	DESCRIPTION
	4513311	Screw- earth screw
	2657161	Socket-AC socket (UL)
	2740241	Cord-AC power cord (UL)
	0043793	Bushing (for AC power cord) (UL)
	2687411	Terminal-3P screw terminal
	0541358	Socket-DIN 5P socket
	2677161	8P US pin jack
	2687431	Terminal-8P push terminal
	2677064	Jack-headphone jack
	2687381	6P terminal board
	2687371	4P terminal board
	2727241	Holder-fuse holder (UL)
	0544510	Lug terminal
	4125642	Washer - 10φ washer
	4790096	Washer- 8φ washer
	2577126	Signal meter
	2577127	Center meter (for SR-5200)
	2767201	Lamp-pilot lamp (6.3V, 0.25A)
	2767115	Lamp-pilot lamp (6.3V, 65mA)
	2767232	Lamp-pilot lamp (8V, 30mA)
	2727161	Holder-lamp holder
	4784103	Screw-3×8φ bind tapping screw
for DIAL MECHANISM ASSEMBLY		
	3198641	Dial scale (for SR-3200)
	3198642	Dial scale (for SR-5200)
	3386612	Dial pointer
	4562181	Tuning shaft assembly
	3915651	Pulley-30φ pulley
for FINAL ASSEMBLY		
	3242271	Escutcheon assembly (for SR-3200)
	3242272	Escutcheon assembly (for SR-5200)
	3281441	Knob-tuning knob
	3281451	Knob-Balance, Volume knob
	3281452	Knob-Bass, Treble knob
	4784101	Screw-3×8φ bind tapping screw
	9403002	Cabinet assembly
	3916411	Leg